

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)	
)	
Expanding Flexible Use of the 3.7 to 4.2 GHz)	GN Docket No. 18-122
Band)	
)	

**COMMENTS OF SATELLITE OPERATORS ON THE PETITION FOR EXPEDITED
RECONSIDERATION OR CLARIFICATION**

Inmarsat Inc. (“Inmarsat”), Hughes Network Systems, LLC (“Hughes”), and EchoStar Satellite Services L.L.C. (“EchoStar”) (jointly, “Satellite Operators”) file these Comments in support of the Petition for Expedited Reconsideration or Clarification of the *C-Band Order*,¹ filed by Eutelsat S.A. (“Eutelsat”) pursuant to Section 1.429 of the Federal Communications Commission’s rules.² The Satellite Operators agree with Eutelsat that the Commission should clarify, or reconsider to the extent necessary, the *C-Band Order* to ensure that reimbursements to C-Band satellite operators are limited only to reasonable and necessary costs related to relocation of C-Band operations to the 4.0-4.2 GHz frequency range in the contiguous United States, and that satellites constructed using reimbursed funds are dedicated to serving the United States only in the C-Band for the entirety of their useful lives. The Satellite Operators understand the important public policy goals the Commission is attempting to achieve in this proceeding and appreciates the Commission’s commitment to ensuring that existing users relying upon 3.7-4.0 GHz band satellite operations in the United States continue to enjoy uninterrupted service. In balancing these interests, however, the Commission should also take care that its C-Band actions

¹ Expanding Flexible Use of the 3.7 to 4.2 GHz Band, GN Docket No. 18-122, *Report and Order and Order of Proposed Modification*, 35 FCC Rcd 2343 (2020) (“*C-Band Order*”).

² See Petition for Expedited Reconsideration or Clarification of Eutelsat S.A., GN Docket No. 18-122 (filed May 26, 2020) (“Eutelsat Petition”).

in the contiguous United States do not inadvertently unbalance competition or disserve American consumers.

I. INTRODUCTION & SUMMARY

The Satellite Operators do not currently provide commercial C-Band services in the 3.7-4.2 GHz band in the contiguous United States, and have no plans to introduce such services. Each of the Satellite Operators does, however, provide satellite services in various other frequency bands, including services that compete with those provided in the same bands by incumbent C-Band satellite operators, both in the United States and elsewhere.³ Accordingly, while the Satellite Operators do not have a strong interest in the C-Band transition reimbursement process to the extent it affects solely the C-Band operators in the United States, they have a significant interest in seeing that the reimbursement process does not distort the competitive playing field for satellite services in other frequency bands in the United States or around the world.

In its petition, Eutelsat requested that the Commission “clarify the standards and allocation criteria that will be used to (i) determine which new C-band satellite costs are “reasonable” and “necessary” and therefore eligible for relocation, as well as ensure that new C-band satellite capacity remains dedicated to serving the CONUS market; (ii) exclude the costs of new C-band satellite equipment, services, or activities that go beyond those considered compensable; and (iii) ensure appropriate and transparent safeguards are in place, including third party review of cost estimates, to reduce the risk that unreasonable costs will be shouldered by the U.S. public.”⁴ Put more simply, Eutelsat stated its belief that “in the context of the C-band

³ The *C-Band Order* identified eight incumbent space station operators: ABS, Empresa, Eutelsat, Hispasat, Intelsat, SES, Star One, and Telesat. *C-Band Order* at ¶ 115.

⁴ Eutelsat Petition at 3.

transition, a comparable facility for satellites must necessarily be a C-band-only payload operating in the 4.0-4.2 GHz band providing coverage solely to the CONUS for the entire duration of its useful life.”⁵

The Satellite Operators agree with Eutelsat that the Commission should clarify the *C-Band Order*, or reconsider it to the extent necessary to ensure that the reimbursement framework does not have anticompetitive effects on the U.S. and global satellite industry or otherwise misappropriate the money of United States consumers. The Commission should take steps to ensure that reimbursement payments are not used to subsidize the cost of deploying new satellite capacity in frequency bands besides C-Band, or C-Band or other satellite capacity that serves areas outside the contiguous United States. Additionally, the Commission should condition the acceptance of reimbursement payments on a commitment that the C-Band satellite capacity will be used only to serve the United States throughout its useful life.

II. C-BAND REIMBURSEMENT PAYMENTS SHOULD NOT DISTORT COMPETITION IN OTHER FREQUENCY BANDS OR REGIONS.

The satellite communications sector is innovative and competitive. With the entry of new service providers, the deployment of new system architectures, the expansion of satellite services into additional frequency bands, and the ongoing rapid development of new applications like Earth Stations in Motion (“ESIM”), competition among satellite operators is among the fiercest it has ever been. Traditional Fixed Satellite Service (“FSS”) operators are competing with historically Mobile Satellite Service (“MSS”) operators. Systems deployed in Geostationary Earth Orbit (“GEO”) are now competing with those deployed in Medium-Earth Orbit (“MEO”) and Low-Earth Orbit (“LEO”). And competitive satellite services are provided across the L-, S-, C-,

⁵ *Id.* at 4.

Ku-, Ka- and soon Q/V-bands. In addition, with new and innovative technologies, satellite operators are also competing with terrestrial service providers in the United States and abroad. Under these circumstances, the Commission should take care to ensure that its well-intentioned efforts to promote innovation in one context (terrestrial C-Band broadband services) do not inadvertently distort competition in another.

Accordingly, the Satellite Operators agree with Eutelsat that the Commission should reconsider or clarify the *C-Band Order* to ensure that the processes for reimbursement of C-Band satellite operator relocation costs is strictly limited to those costs directly attributable to ensuring continuation of GEO satellite broadband services in the contiguous United States and in the 4.0-4.2 GHz band. These satellite operators should not be permitted to subsidize the development, production, and launch of new hybrid systems or experimental technologies, or to strengthen their competitive position in other geographic markets or by adding other frequency bands to their offerings, by exploiting Commission-guaranteed reimbursement while competitors without legacy C-Band operations are left to raise capital and accept risk according to usual commercial practices. Clarifying this aspect of the *C-Band Order* is consistent with fundamental principles of fairness and with the Commission's express intent in the *Order*.

The Commission's intent regarding the reimbursement regime set up in the *C-Band Order* was to enable the replacement of legacy C-Band satellite services that will be disrupted by repurposing of the 3.7-4.0 GHz frequency band in the contiguous United States. The Commission explained in the *C-Band Order* that its focus was "reforming the use of the 3.7-4.2 GHz band."⁶ It continued, "by repacking existing satellite operations in to the upper 200 megahertz of the band . . . , we make a significant amount of spectrum . . . available for flexible

⁶ *C-Band Order* at ¶ 4.

use throughout the contiguous United States, and we do so in a manner that ensures the continuous and uninterrupted delivery of services currently offered in the band.”⁷ Additionally, the license modification adopted by the Commission “applies only to licenses and grants of market access held within the contiguous United States; authorizations for FSS operations outside of the contiguous United States may continue to operate in the entire 3.7-4.2 GHz band.”⁸ The recently-released preliminary transition cost catalog also states that it estimates costs that may be incurred “as a result of the required transition out of the 3700-4000 MHz band into the 4000-4200 MHz band in the contiguous United States,” further evidencing the Commission’s intent.⁹

Despite the explicitly stated intention of the Commission to facilitate a repacking of existing C-Band operations into the 4.0-4.2 GHz band, the portions of the *C-Band Order* addressing compensation of relocation costs leaves some ambiguity on this point, which the Commission should resolve. While the *Order* provides several admonishments that costs must be “reasonable”, and it provides some guidance on the sorts of costs that might be reasonable, this guidance is not sufficiently limited to costs associated with repacking existing users into the 4.0-4.2 GHz band within CONUS:

- “Consistent with Commission precedent, compensable costs will include all reasonable engineering, equipment, site and FCC fees, as well as any reasonable, additional costs that the incumbent space station operators and incumbent earth station operators may incur as a result of relocation.”¹⁰
- “Reasonable” relocation costs are those necessitated by the relocation in order to ensure that incumbent space station operators continue to be able to provide

⁷ *Id.*

⁸ *Id.* at ¶ 132.

⁹ 3.7 GHz Transition Preliminary Cost Category Schedule of Potential Expenses and Estimated Costs at 1, *attached to* Wireless Telecommunications Bureau Seeks Comment on Preliminary Cost Catalog Schedule for 3.7-4.2 GHz Band Relocation Expenses, GN Docket No. 18-122, *Public Notice*, DA 20-457 (rel. April 27, 2020).

¹⁰ *C-Band Order* at ¶ 193.

substantially the same or better service to incumbent earth station operators, and that incumbent earth station operators continue to be able to provide substantially the same service to their customers after the relocation compared to what they were able to provide before.”¹¹

- “We recognize that incumbents may attempt to gold-plate their systems in a transition like this. Let us be clear: Incumbents will not receive more reimbursement than necessary, and we require that, to qualify for reimbursement, all relocation costs must be reasonable.”¹²
- “For incumbent space station operators, flexible-use licensees will be required to reimburse eligible space station operators for their actual relocation costs, as long as they are not unreasonable, associated with clearing the lower 300 megahertz of the band while ensuring continued operations for their customers.”¹³
- “We reiterate that compensable relocation costs are only those that are reasonable and needed to transition *existing* operations in the contiguous United States out of the lower 300 megahertz of the C-band”¹⁴

Although the excerpts above, and associated passages in the *C-Band Order*, provide importance guidance on the types of costs that will be compensable, they do not explicitly limit “reasonable” costs to new satellites used to relocate existing C-Band operation to the 4.0-4.2 GHz band, despite the Commission’s suggestion to the contrary.¹⁵ Under the framework in the *Order*, a C-Band operator might submit for reimbursement costs associated with design, construction, and launch of new satellites operating in bands outside the C-Band. This is contrary to the stated intention of the Commission in the *Order*, and not a logical outgrowth from any previous proposal in the record. Accordingly, the Commission should clarify this point.

In its Petition, Eutelsat argues that the Commission should clarify that reimbursement will only be available for satellites that offer only C-Band services and serve only the contiguous

¹¹ *Id.* at ¶ 194.

¹² *Id.* at ¶ 195.

¹³ *Id.* at ¶ 199.

¹⁴ *Id.* at ¶ 204.

¹⁵ *C-band Order* at ¶ 201, n.539 (“We have defined clearly the migration in this context as the costs of transitioning C-band services to the upper 200 megahertz of the band (e.g., reporting, retuning, and replacing antennas, and installing filters and compression hardware)”).

United States for the entirety of the satellite's life.¹⁶ Eutelsat argues that "hybrid satellites offering service in Ku-, Ka-, or other satellite bands should not be eligible for reimbursement at all, given the fact that those services are unaffected by the relocation process," and points further to the complications inherent in allocating the portion of the design, construction, launch, and other costs of hybrid satellites actually and reasonably attributable to the C-Band portion of the satellite.¹⁷

The Satellite Operators agree with Eutelsat's assessment of the administrative difficulties inherent in separating the C-Band costs from the overall costs of a hybrid satellite. In light of these challenges, it would be reasonable for the Commission to determine that reimbursement is limited to satellites including only C-Band payloads. Doing anything short of this raises the risk of unintended anticompetitive consequences, because, as Eutelsat correctly notes in its Petition, "even partial reimbursement of costs associated with multi-band satellites will significantly subsidize non-C-band, non-CONUS capacity, thereby diverting relocation costs from their intended use and disrupting competition."¹⁸

The reality of the satellite sector today is that satellite systems often include payloads covering multiple bands. This can be a commercial, technical, and regulatory necessity, especially for GEO systems. Therefore, it may be unrealistic to insist that replacement satellites utilize only C-Band, despite this being the most appropriate path forward. To the extent the Commission will permit reimbursement for hybrid satellites utilizing additional frequency bands, it should ensure that the reimbursement not only is limited to the costs necessary to facilitate the transition, but that the reimbursement does not distort competition in other regions or frequency

¹⁶ Eutelsat Petition at 3-4.

¹⁷ *Id.* at 5.

¹⁸ *Id.* at 12.

bands. No reimbursement should be given for components not related to the provision of C-Band services in the 4.0-4.2 GHz band in the contiguous United States. For satellites that will be used to provide C-Band service outside the United States, or for shared costs of a hybrid satellite system including other frequency bands—such as those related to design, launch service, and procurement of satellite bus, control facilities, and other shared components—reimbursement should not exceed the proportionate share of costs based upon the fraction of the total satellite bandwidth delivered to the contiguous United States in C-Band. Even this approach runs the risk of cross-subsidization of competitive services in other bands by essentially allowing a non-C-Band satellite to be procured and launched at a discount, and so the Commission should strongly consider limiting reimbursement only to satellites that provide service entirely in the C-Band with solely U.S. coverage.

The Commission explains in the *C-Band Order* that its transition process is based on the *Emerging Technologies* framework that it has used since 1992.¹⁹ While the *Emerging Technologies* framework has been an effective mechanism for facilitating relocation of terrestrial wireless incumbents to allow introduction of new services, the Satellite Operators are not aware of a precedent for this framework being applied to the relocation of FSS incumbents. Application of this framework to satellite for the first time will result in a windfall from which no other relocated incumbent previously has benefited due to the many different considerations in satellite relocation.

¹⁹ *C-Band Order* at ¶ 111 (citing Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, ET Docket No. 92-9, *First Report and Order and Third Notice of Proposed Rulemaking*, 7 FCC Rcd 6886 (1992) (*Emerging Technologies Order*)).

For instance, unlike terrestrial networks, geostationary orbit satellite networks have an expected life of greater than 15 years. In the case of the C-Band satellite operators who will receive these reimbursement costs, their satellites are overwhelmingly many years into their useful lives.²⁰ To continue to provide their current services, these C-Band operators would have been required to replace these systems soon even without this proceeding. Accordingly, these are not actually new or unforeseen expenses for them. And the new, subsidized satellites they will launch potentially will provide service for decades into the future. Moreover, unlike terrestrial wireless systems, in which each base station serves a relatively small geographic area, geostationary satellites are inherently international in nature. A single new C-Band satellite could cover only a portion of the United States, or the entire United States, along with vast areas outside the United States. Finally, in the case of a satellite, a huge portion of the cost of system deployment are associated with satellite bus, launch, and other aspects not related to the service payload. Allowing an operator to include non-C-Band payloads onto a satellite where these other costs have been reimbursed is a windfall on a different scale than simply being allowed to include an additional antenna on a subsidized terrestrial base station.

While these costs may have been considered reasonable in the terrestrial context based on the Commission's earlier policies, there are other important considerations with reimbursement of non-C-Band or non-CONUS costs in the satellite context. By paying costs related to these additional payloads the Commission is subsidizing a long term satellite network of 15 years plus

²⁰ The Satellite Operators examined the transition plans filed by the incumbent C-Band operators and found that a large majority of the satellites they intend to replace are over 10 years old, and nearly half of them are 15 years or older. These satellites are approaching the end of their useful lives and would have been replaced by the operators—without reimbursement—in the normal course of business if these operators were to continue to provide C-Band services. *See infra* Attachment.

against other operators, including U.S. operators such as EchoStar, Hughes and others. In essence, what the Commission is now creating is a state-subsidized competitor to its own commercial operators in the United States. In addition, since there is no limit as to where the satellite can cover, both the C-Band and non-C-Band payloads on the new satellites can be used to provide service in other markets where the Satellite Operators are operating – creating an unfair competitive advantage for the C-Band operators around the world. Over the long term, by introducing subsidized competitors into the satellite market, competition (and accordingly, innovation and consumers) will be harmed as current and future operators will have a very difficult time competing based on costs.

To be clear, this is not just a hypothetical concern of unfair and anti-competitive subsidization. At least one C-Band operator has already told the Commission that this is precisely its plan. In its recently-filed Transition Plan, Intelsat states clearly that “it will add additional payloads on some of the satellites” identified in its plan.²¹ In a previous written *ex parte* presentation, Intelsat had asserted that “to the extent that any satellites necessary to achieve acceleration were to have additional frequencies beyond C-band, Intelsat would only seek reimbursement for the C-band payload costs,”²² however its Transition Plan does not suggest it intends to keep to this commitment. Instead the transition plan includes reimbursement costs beyond just the C-Band payloads, including construction and launch of these satellites, without identifying how these reimbursement claims will be reduced to avoid a windfall. Intelsat is not

²¹ Intelsat C-Band Clearing Transition Plan at n.14 *attached to* Letter from Michelle V. Bryan, Secretary, Intelsat License LLC to Marlene H. Dortch, Secretary, Federal Communications Commission, GN Docket Nos. 18-122, 20-173 (filed June 19, 2020) (“*Intelsat Transition Plan*”).

²² Intelsat LLC, Notice of *Ex Parte* Meeting at 2, GN Docket No. 18-122 (filed May 26, 2020).

trying to hide anything here. They are telling the Commission in clear terms that they intend to seek reimbursement from the C-Band transition to pay for the construction, launch, and insurance of non-C-Band satellites that will distort competition in the United States. This is a result the Commission should not allow.

As this is a case of first impression for the Commission, it should take care to adapt its policy appropriately to account for the technical and economic specifics of the satellite sector and the very real anti-competitive conduct that can occur by allowing the subsidization of additional satellite capabilities in new bands or areas outside the contiguous United States.

III. NEW C-BAND SATELLITE CAPACITY SHOULD SERVE CONUS THROUGHOUT ITS USEFUL LIFETIME.

In its Petition, Eutelsat also argues that “the Commission should clarify that eligible satellites must remain in position serving the CONUS for their entire useful life.”²³ For similar reasons to those discussed above, such a clarification is entirely appropriate and reasonable to avoid anticompetitive results. Moreover, the relocation payments made to the C-Band operators ultimately come from U.S. consumers through the C-Band Auction winners that will fund the transition. It would be inappropriate for the satellite operators to use American funds to subsidize the development of their systems, and then relocate the systems to serve consumers in other countries as soon as it is commercially convenient to do so. The Commission should clarify the *C-Band Order*, and reconsider it to the extent necessary to ensure that reimbursement funds are used only for systems that will remain in service over the United States, and to develop a claw back mechanism to reclaim funds from such systems should they eventually be moved. A

²³ Eutelsat Petition at 8.

commitment to provide service only to the United States for the life of the system should be a condition of accepting reimbursement payments.

IV. CONCLUSION

Even with a carefully designed cost allocation formula and a highly developed Relocation Payment Clearinghouse function, it will be difficult to distribute relocation payments in a way that does not distort competition. Without explicit and detailed guidance on these points, it will be impossible. Also, any satellites constructed with funds provided by American consumers through the C-Band relocation process should be limited throughout their lifetime to serving those consumers. Anything short of that would be a waste and misappropriation of U.S. consumer money. Accordingly, the Commission should clarify, and reconsider to the extent necessary, the *C-Band Order* to address these critical points.

Respectfully submitted,

/s/ M. Ethan Lucarelli

M. Ethan Lucarelli
Director, Regulatory and Public Policy

Inmarsat Inc.
1441 L Street, NW
Suite 610
Washington, DC 20005

/s/ Jennifer A. Manner

Jennifer A. Manner
Sr. Vice President, Regulatory Affairs

Hughes Network Systems, LLC
EchoStar Satellite Services L.L.C.
11717 Exploration Drive
Germantown, MD 20876

June 26, 2020

ATTACHMENT
C-Band Satellites Being Replaced¹

Satellite Provider	Satellite Names/Call Signs	Age
Telesat	ANIK F1R/S2674	15 years
	ANIK F3/S2703	13 years
SES	NSS-7/ S2463	18 years
	SES-4/ S2828	8 years
	NSS-10/ S2415	15 years
	SES-6/ S2870	7 years
	SES-14/ S2974	2 years
	AMC-3/ S2162	23 years
	AMC-6/ S2347	20 years
	SES-2/ S2826	9 years
	SES-1/ S2807	10 years
	SES-3/ S2892	9 Years
	SES-11/ S2964	3 years
	AMC-11/ S2433	16 years
	AMC-4/ S2135	21 years
	AMC-8/ S2379	20 years
	AMC-18/ S2713	14 years
	NSS-9/ S2756	11 years
Intelsat	G-17/S2715	13 years
	G-18/S2733	12 years
	G-23/ S2592/S2823/S2179	17 years

¹ Data based on initial transition plans filed in Dockets WTB 18-122 and GN 20-173

	G-15/S2387	15 years
	G-14/S2385	15 years
	G-13/H-1/ S2475/S2824/S2386/S3049	17 years
	G-3C/S2381	18 years
	G-28/S2160	15 years
	G-16/S2687	14 years
	G-19/S2647	12 years
Eutelsat	EUTELSAT 113 WEST A/ S2695	14 Years
	EUTELSAT 115 WEST B / S2938	5 years
	EUTELSAT 117 WEST A / S2873	7 years
	EUTELSAT 172B / S3021	3 Years
Claro	Star One C1/S2677	13 years (End of Life Expected mid 2021 per Claro's transition plan)
	Star One C2/S2678	12 years